

**REMARKS-General**

The newly drafted independent claim 37-42 incorporates all structural limitations of the original claim 1-36 and includes further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 37-42 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

**Response to Rejection of Claims 21, 24, 28, 29, 32, and 36 under 35 USC 103**

The Examiner rejected claims 21, 24, 28, 29, 32, and 36 over Koo (US 5234985) in view of Wey (US 20050061157 A1) and Uenishi (US 6099634), and further in view of Andrews (US 20050171253 A1), and Watanabe (US 6296943 B1). Pursuant to 35 U.S.C. 103:

"(a) A patent may not be obtained thought the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made."

In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Koo which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Wey, Uenishi, Andrews and

Watanabe at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

The applicant therefore has canceled the rejected claims 21, 24, 28, 29, 32, and 36 and, without introducing new matter, presented new claims 37-42 containing the patentable subject matter of the instant invention. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Koo, are obvious in view of the cited arts, Wey and Uenishi, and further in view of Andrews and Watanabe, we have to identify all the differences between the newly presented claims of the instant inventions and Koo, Wey, Uenishi, Andrews and Watanabe. The applicant respectfully identifies the differences between the newly presented claims of the instant invention and Koo, Wey, Uenishi, Andrews and Watanabe as follows:

(a) Claims 21 and 29 were rejected under 35 USC 103(a). These two claims have been canceled, and the patentable subject matter of the instant invention is now contained in the newly presented claims 37 and 40. In the newly presented claims 37 and 40, "a liquid container comprising a plastic made container body for storing liquid and a plastic made container cap covering at the opening of the container body" is claimed as a plastic bottle for preserving the liquid, wherein Koo merely teach a transparent resin composition adapted to form a food container for storing the solid food in a refrigerator to extend freshness of the food. The applicant respectfully submits that the liquid container of the instant invention is used for preserving the liquid especially under the sunlight but not in the refrigerator.

(b) In claims 37 and 40, "**a nano titanium oxide**" is claimed for blocking ultra-violet light entering into the liquid chamber of the liquid container, wherein Koo merely teaches the food container made of resin composition is used for storing the solid food in the refrigerator. It is apparent that Koo fails to teach and suggest the food container is used under the sunlight. In fact, the food suggested by Koo is pork, crab, strawberry, or apple being stored in the food container inside the refrigerator without any mention of any liquid, such as water or beverage. In addition, there is no ultra-violet light in the refrigerator.

(c) In claims 37 and 40, "a far infrared ray emitter for emitting far infrared rays penetrating into the liquid chamber" is claimed to depolarize negative ions of the liquid, wherein Koo merely teaches the food container made of transparent resin is adapted to keep the solid food in the refrigerator without any depolarizing the negative ions of the liquid to keep the liquid in the liquid container in a germ-free manner.

(d) In claims 37 and 40, "the ceramic powders mixing with the nano titanium oxide to form **an anti-germ mixture**" is claimed to integrate with the liquid container, wherein Koo merely teaches the resin composition includes 1 to 30 weight parts of ceramic material added into a 100 weight parts of polycarbonate resin and mixed together by means of Henschel mixer. Throughout the description, Koo merely teaches such resin composition is used as a material of the food container to keep the food at a predetermined low temperature (in the refrigerator).

(e) Koo and Wey fail to teach and suggest the anti-germ mixture is integrally mixed with the raw plastic material to integrally form the container body and the container cap of the liquid container as claimed in claims 37 and 40. Koo merely teaches the resin composition includes ceramic material added into a polycarbonate resin and mixed together by means of Henschel mixer to form the food container, while Wey merely discloses an adhesive sticker that can be attached to a beverage serving means. Koo and Wey do not teach and suggest mixing of anti-germ mixture with raw plastic material for the purpose of forming the container body and the container cap of the liquid container as claimed in claims 37 and 40.

(f) Uenishi discloses fan- or disk-shaped titanium oxide particles which have a sufficiently high ultraviolet blocking effect for use as an UV inhibitor in sunblock cosmetics, UV inhibiting paints and plastics etc. However, Uenishi does not teach or suggest the possibility of integrally mixing titanium oxide particles with raw plastic material and far infrared ray emitter to form a germ barrier in a liquid container. The fact that titanium oxide particles can be utilized to block ultraviolet radiation with whatsoever performance does not in any way suggest or teach that they can also be integrally mixed with raw plastic material and far infrared ray emitter in a liquid container for creating a germ free environment therewithin.

(g) Accordingly, the applicant believes that neither Koo, Wey, and Uenishi, separately or in combination, suggest or make any mention whatsoever of the difference subject features (a) to (f) as claimed in the amended claims 37 and 40 of the instant invention.

(h) Regarding to claims 24 and 32, the applicant has canceled claims 24 and 32, and without introducing new matter, presented new claims 38 and 41 containing the patentable subject matter of the instant invention over Koo in view of Wey and Uenishi as applied to claims 21 and 29, and further in view of Andrews. Andrews merely teaches a polymer component with UV absorbing moieties which are permanently and covalently bonded to the polymer component via condensation, wherein the UV absorbers are hydroxyphenylbenzotriazole UV absorbers. In other words, Andrews fails to teach any **nano** titanium oxide mixed with the far infrared ray emitter for blocking UV light. In other words, Andrews is silent regarding any **nano sized** UV absorber made of titanium oxide. Furthermore, the instant invention discloses the plastic material is integrally mixed with the ceramic powders and nano titanium oxide to form a raw material to make the liquid container without undergoing any covalently bonding technique via condensation.

(i) Moreover, regarding to claims 21 and 29, Koo, Wey, Uenishi, and Andrews are silent regarding the weight ratio of the far infrared ray emitter and the plastic material is 1:10,000. Koo, Wey, and Uenishi are silent regarding the weight of the nano titanium oxides and the plastic material is 1:10,000. The Examiner noted that Andrews teaches the plastic container or film stabilized by a compound or compounds of component may also optionally contain from about 0.01 to about 10% by weight. However, Andrews fails to teach the nano titanium oxides are mixed with the far infrared ray emitter by a weight ratio of 1:1. It is submitted that the weight ratio of the nano titanium oxides and the far infrared ray emitter is one of the important factors because the optimized amounts of the nano titanium oxides and the far infrared ray emitter mixing with the plastic material can be effectively formed a germ barrier of the liquid container. Accordingly, this feature has now included in claims 37 and 40.

(j) Regarding to claims 28 and 36, the applicant has canceled these two claims, and without introducing new matter, presented new claims 29 and 37 containing the patentable subject matter of the instant invention over Koo in view of Wey and Uenishi as applied to claims 21 and 29, and further in view of Andrews and Watanabe.

Koo, Wey, Uenishi, Andrews and Watanabe are all silent regarding the far infrared ray emitter and the nano titanium oxide, which constitute 5% by weight of the protective arrangement, and water which constitutes 95% by weight of the protective arrangement. Nevertheless,

The applicant respectfully submits that since claims 37-42 are rejected under 35 USC 103(a), neither identical prior art is cited nor generic claims of prior art read on the instant invention. Practically speaking, the instant invention as claimed in the newly presented claims 37-42 contains structural features different to each of the cited arts. If the instant invention fails to obtain a patent which claims for limited protection, everybody in this industry (including the applicants of the cited arts) can simply copy the structural features of the instant invention without needing to invest any research and development cost. Thus, one is able to compete with the applicant with even a lower production cost than the applicants of the instant invention. It is not only an unfair competition but also violates the spirit of patent law which encourages invention and technology development for the benefit of mankind. Accordingly, the examiner is requested to kindly reconsider and withdraw the obviousness rejection made against the aforementioned claims.

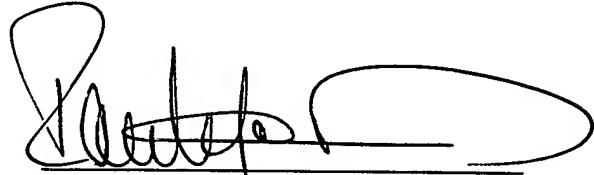
### **The Cited but Non-Applied References**

The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the rejection are requested. Allowance of claims 37 to 42 at an early date is solicited.

Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

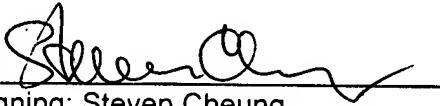


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